# HOW DO YOUNG CHILDREN LEARN HOW TO READ AND WRITE WHEN MEANING IS THE MAJOR FOCUS?

BY

Leona N. Dobson

Marietta E. Hurst

EDUCATIONAL RESEARCH INSTITUTE OF BRITISH COLUMBIA

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AUTHOR(S): Leona N. Dobson and Marietta E. Hurst

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EDUCATIONAL RESEARCH INSTITUTE OF B.C.

Suite 701 - 601 West Broadway

Vancouver, B.C. V5Z 4C2

Telephone: (604) 873-3801

The premise of this study was that children learn to read and write in successive approximations and are firmly placed on a learning continuum long before they enter school. Our purpose was to locate the children on the continuum in terms of both reading and writing, to examine the connections between these processes and to document their progress. We sampled the reading and writing events of pupils every two weeks through two years of schooling in Kindergarten and Grade One. We collected the data in an environment based on principles found to be conducive to language learning. We responded to the meaning of their approximations as the absolute priority. We found that their initial approximations were fluently invented. They first began to incorporate the alphabetic principle in the writing and in their reading of it. Later they incorporated the principle into their reading of conventional text and began to recreate the author's message. This effort resulted in a temporary loss of fluency but they continued to have meaning as their major focus. The broad developmental framework of the study included the nurturing environment which required highly individualized interactions between researchers and pupils. In this setting we found that the children readily engaged in the task, worked at their own level and revealed their competencies. In essence this approach to research constituted a sound approach to teaching.

## How Do Young Children Learn to Read and Write When Meaning is the Major Focus?

How do children learn to read and write? This question has been asked by teachers and researchers alike for many years but the answer is still far from clear. Traditionally, most of the interest has focused upon reading and the relative effectiveness of the various methods used to teach it. This approach seems to rest upon two main assumptions: that formal instruction forms the basis of written language learning and that children must be able to read before they can write.

We believe, however, that the learning of language, both oral and written, is a developmental process. Children hear language and, as they gradually discover its functions, they initiate its use for their own purposes. People respond to their attempts to create meaning, paying little attention to form. In fact, the driving force behind their growth and development as language users seems to be the refinement of meaning.

Similarly, children live in an environment which surrounds them with print and with examples of people using that print. They engage in reading-like and writing-like activities at quite a young age. Although these activities are fairly gross approximations to reading and writing as practised by literate adults, they may be necessary precursors to the growth of literacy. We conceptualize children's learning on a continuum of development which has its roots in their earliest experiences. We foster development when we respond to the content of their representations, for through their attempts to generate meaning, they will discover the form.

In order to study the progress of children's reading and writing we set up a classroom environment based upon the principles that Hurst (1982) had found to be conducive to oral language learning (Appendix A). In this setting we asked children to read and write from the very beginning of Kindergarten. This expectation was possible because we extended the definition of reading and writing to include reading-like and writing-like events. We monitored their development every two weeks through to the end of Grade One. We believed that in such a nurturing environment children would reveal what they already knew about written language and would apply their increasing knowledge in a way that made sense to them.

Our premise was that children learn to read and write in successive approximations and are firmly placed on a learning continuum long before they enter school. Our purpose was to locate the children on the continuum in terms of both writing and reading, to examine the connections between these processes and to document their progress.

## Relevant Research

The language processes of reading and writing are highly complex. They are multi-level processes which involve three sub-systems of language: the semantic (meaning) sub-system, the syntactic (grammar) sub-system and the graphophonic sub-system, in which patterns of letters correspond to patterns of sounds at the word level. The study of language errors at all three levels has revealed that writers (Britton, 1970) as well as readers (K. S. Goodman, 1969) used aspects from all sub-systems simultaneously.

The multi-level study of oral reading errors in school children has revealed consistent findings (Biemeiller, 1970; Clay, 1968; K.S. Goodman, 1978; K.S. Goodman & C. Burke, 1973; Y.M. Goodman & C. Burke, 1969; Weber, 1970; Williams & Clay, 1973). These studies have indicated that all readers of English, regardless of their proficiency or language background, use the same multi-level process. Where they differ is in how well they integrate reading cues from the three language sub-systems. Studies of the reading-like and beginning reading behaviour of preschoolers (Doake, 1979) and of New Zealand children (Clay, 1968) during instruction at age five, found that they work through a developmental progression in the integration of reading cues.

Chomsky (1968) proposed that learners of both oral and written language form and test hypotheses and thereby induce the rules of language. Recent findings (Bissex, 1980; Gentry, 1982; Henderson & Beers, 1980; and Read, 1971) from the work of young writers support Chomsky's thesis. These writers move through developmental stages as they acquire increasing control over all aspects of writing. This progression is well advanced by the time children enter school (Ferreiro & Teberosky, 1982; Y.M. Goodman, 1980; Hiebert, 1981).

Hurst (1982) constructed an evolving model of the continuum of emergent literacy (Appendix B). This model was based on language learning principles (Appendix A) derived from a selective review of positive influences which nurtured the development of oral language. This model illustrated the theory that readers and writers use parallel thinking processes. The ethnographic research by Dobson (1983) involved the documentation of the progress of Grade One writers, the implementation of the principles into classroom practice and the subsequent elaboration of the writing section of the model (Appendix C). What was originally planned as an exploratory study became an integral part of the Grade One curricula and teachers of other grade levels, including Kindergarten, instituted daily writing in their classrooms. The resulting program has been published (Hurst, Dobson, Chow, Nucich, Stickley & Smith, 1983).

Theories developed by certain cognitive psychologists ( Pearson & Spiro, 1980; Rumelhart, 1977) considered reading to be an interactive process between a reader's prior knowledge and the text. Tierney & Pearson (1983) and Wittrock (1983) emphasized the similarity in the thinking processes involved in reading and writing. They pointed out that not only writers but also readers actually compose meaning. It is, therefore, logical that these processes will interact with one another as they involve the same kind of thinking processes. The reader/writer who is actively inducing the rules controls the process in both instances.

Observers and/or evaluators cannot help but affect a situation by their very presence. Researchers have usually tried to minimize this influence. Calkins (1983), however, showed that the documentation of such effects actually adds relevant information to research. Therefore we will be reporting upon the nature of pupil-researcher interactions as an integral part of the data.

## Method

We undertook to trace the development of reading and writing qualitatively, simultaneously and longitudinally. We wished to discover what children could do, and to obtain some indications of their understandings.

Our premise was that children would reveal the breadth of their understanding of these processes if they were immersed in a social and psychological setting which promoted language learning. Therefore we chose a research design and procedures for data collection which would be consistent with the principles (Appendix A) and with the models (Appendices B & C).

A qualitative perspective requires considerable flexibility. We had already established a consistent framework for our teaching and research which was based upon a shared view of literacy and its growth. Using this framework not only set limits for the study, but also provided freedom within its bounds. It allowed us to individualize all our interactions with the children, so that we were able to search for the qualitative aspects of their learning. For example, we could not give the children new information but we could probe for understanding.

We wanted to be as systematic and precise as possible while retaining the desired flexibility. A set routine was followed in each session. The children produced a piece of writing and we recorded their reading of it. They also read a book and we recorded their reading on tape and on paper. We catergorized both sets of data according to the classifications set out on the checklists.

## Participants and Setting

The research took place in a school which was located in a low socio-economic urban area. The participants included all those Kindergarten pupils who spoke some English and who were expected to remain in the school for the next two years. We started to collect data from 30 children. We are reporting the data gathered from the 18 children who completed the study. There were nine girls and nine boys. Ten of the children spoke English as a second language (ESL). There were seven different languages spoken in addition to English.

During the Kindergarten year the children were enrolled in two separate classes. The make-up of the two classes changed in the Grade One year. The classroom teachers designed their programs to provide a whole language experience for their pupils. Daily activities included shared reading, shared writing, independent reading and independent writing. They also taught the alphabet, printing, phonics, and the manipulation of word cards to form sentences.

We conducted the research personally as an extension of our particular responsibility for teaching those children with learning problems. During our years together as resource room teachers we had continually designed our own programs and through diagnostic teaching, adapted them to facilitate the progress of the children's learning.

## Procedure

During the first weeks we visited the two Kindergarten classrooms of the school, to introduce ourselves and become acquainted with the children. We read aloud to the children from titles in the Read Together set from the Story Box Readers (Melser, 1980). The selections have refrains, rhythms and rhymes which invite the children to join in. The classes visited our resource room as well.

Beginning in mid October, a routine was established which continued through that school year and the one following. We randomly set up groups of five or six children. Each group came to the resource room at a specified time once every two weeks. They directly entered the room and seated themselves at an oval table according to the random placement of their writing books. These were regular school exercise books, half-lined and half plain. Felt tipped pens and pencils were in the centre of the table. One of us recorded observations, supervised and interacted with the children at this writing table. The other recorded the reading session at another table at some distance in the large room. We regularly conferred regarding our interpretations and alternated roles every two months.

### Writing

We told the children to, "Draw a picture and write about it". This direction became unnecessary after a session or two. We encouraged those who were reluctant to write by such comments as, "Just use your own writing", "Do it your own way" or "You may use pretend writing". When asked for help we replied with such comments as, "It's your writing, do it your own way". Such responses were intended to put the control and responsibility for writing firmly in the children's hands. These responses also signalled our acceptance of what they might do. We did not make suggestions nor did we supply any additional information, however, we applauded any efforts to self-correct or to expand writing.

We dated each day's work (unless they wished to date their own). We observed the children as they worked. We recorded those happenings which seemed to be significant, such as; how they began, how they ended, how the writing proceeded (left to right? top to bottom?), whether they vocalized as they wrote, whether they seemed to plan, and if so in what form and how they interacted with one another at the table.

When they finished their writing, they read it to us in any way they could. We responded to the content of the message by adding a comment of our own, asking a question or repeating their own words. We wrote the children's reported message in the back of their exercise books in our own handwriting, indicating any occurrence of match and mismatch between their reading and the print. We dated their work and our notes for cross-reference.
Following our response to the meaning, we probed further if we felt there had been a change in form. The probes were chosen to discover whether the change was intended and what that change might mean. We might say:

"Read it with your finger."
"Show me where it says . . . ."
"Read it again."
"How did you know to do it this way?"
"Tell me about this part." (while pointing to unexplained text)

Our observations were recorded in the appropriate categories on the checklist, Record of Writing Growth, (Appendix D). By the beginning of November of Grade One, the children had advanced in their writing to the point where some categories could be eliminated and others elaborated. Therefore, we revised the checklist (Apppendix E).

Reading

The children were called to the reading area in random order, one at a time. We placed three books on a table from which they selected one to read. The selection consisted of books from the Story-Box Readers (Melser, 1980), that the children had not seen before. There are forty books in the Get Ready and Ready-Set-Go series that are eight pages long. The illustrations are colourful and the print clear with a maximum of twelve words per page. The books contain structural patterns of language based on rhythm, rhyme or repetition. We pre-selected a set of four books to offer in a cycle of two sessions. Three of these were presented on the first day. Two weeks later the fourth book was substituted to replace the one already read.

During the Kindergarten year we presented the readers with two familiar stories, the first at the end of February, Brown Bear, Brown Bear (Martin, 1970) and the second, My Shirt is White (Bruna, 1972) in June. These books had been read aloud to them, familiarizing them with the content and the wording.

We told the children to read their selected book in any way they could. We recorded the entire reading session on tape and transcribed it onto the previously prepared typescript (Appendix H), in a manner similar to that used in the Reading Miscue Inventory (Goodman & Burke, 1972). We also filled in the categories on the current checklists, Record of Reading Growth (Appendices F and 6), and noted any additional observations which might prove relevant. If we felt that the children might have more knowledge than they were able to display or if we had uncertainties we wished to resolve, we would probe further. At times these probes provoked the children to extend or self-correct their previous responses. Immediately following each session we listened to the tape and made any necessary additions or corrections to the appropriate records.

## The Children's Reading and Writing

### General Patterns in Development

#### Prephonetic Stage

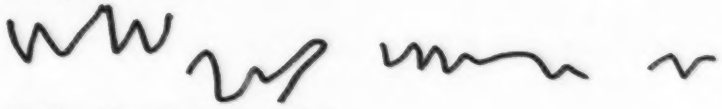
This stage has previously been labelled by Gentry (1982) as precommunicative. As the children are communicating messages, this term is misleading. The feature which determined our assignment of reading and writing to this stage was that the children did not apply the principle that sound units correspond with print. As writers, the children assigned meaning to their repertoire of letters, symbols or scribble. As readers, they brought their experience and prior knowledge of language and picture reading to predict what the text might be. The reading and writing samples of the children indicated that they all began the study at this first stage of development.

#### Writing

In response to our directions, the children drew a picture and in most cases, added letters or a cursive-like form of scribble. In response to our request for reading, most fluently invented a message or label connected with their drawing. They often pointed to parts of their drawing as they

spoke. In response to the probes, "Where does it say that?" or "What about this?" (researcher (R) points to print), a common response was, "That's my writing", or "Just what I said". We could not be certain as to when the children actually composed their message. However it would be consistent with our data if they composed it at the time they read it. The messages they composed were both semantically and syntactically acceptable, in relation to their oral language competence.

From the very beginning of the study, 16 of the 18 children were using letters. Seven of these also used scribble or cursive-like forms. Donald's first work illustrates this occurrence. He wrote and read the alphabet in order, but then said "that's not writing,and subsequently added and read the following scribble.



"This is the house of the rat."

All the children initially printed their letters in the upper case form with the interesting exception of 'I'. It was as if children were choosing to use the most distinctive form of letters.

Fifteen children consistently printed from left to right from the outset. Two varied their direction. One child wrote from right to left throughout this period and well into the second stage. Those children who tracked the print while they were reading did so in the same direction as it had been recorded.

Our examination of writing samples and notes that were recorded just prior to the second stage revealed the presence of certain knowledge and strategies. In spontaneous comments or in response to our probes, the children displayed that they knew letter names and were aware of the alphabetic principle that letters correspond to sound units in English.

Child (C): "Here's I for Tommy."

The children began using their print to achieve a time/space match. They invariably used one or more of the following strategies.

1) The children tracked the print more than once to accomodate the length of the message.

2) They added letters if the print ran out before the message was completed.

3) They timed the reading of a word or syllable to coincide with their pointing to a letter or group of letters.

W A W
fin ger paint

4) Sometimes, as a result of a probe, the children were able to reveal an alphabetic match in a small portion of a longer message. Such incidents revealed that the children were thinking of their messages as they wrote.

Reading

The children all handled books in the conventional direction, opening the book at the front and turning toward the back. However they often proceeded from the right-hand to the left-hand page.

All the children indicated that they realized that it was the text of the book that carried the meaning. Five children obviously tracked the print with their finger, three of these named the letters in sequence while the other two swept their finger along the line of print. Seven children actually touched the parts of the illustration that related to their message, however when asked "where does it say that?", they clearly indicated the print.

The children produced fluent and meaningful readings which were grammatically acceptable (in relation to their oral language competence) both in response to print in text and to their own writing. This remained constant throughout this stage.

Semiphonetic Stage

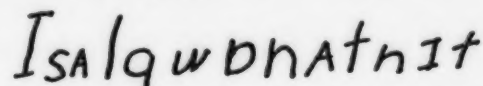
We assigned children's writing samples to this stage when they showed partial mappings of letters to the sounds of English (alphabetic principle). To receive credit for this match they had to reproduce it in the reading of their written messages. We searched for evidence of this stage in their reading of the unfamiliar books but we were unsuccessful. At the end of February and in June, we presented the the two familiar books, Brown Bear, Brown Bear (Martin, 1970) and My Shirt is White (Bruna, 1972). In these books we made our first observations of children dipping into print.

It was difficult to evaluate the work of one child. In her first samples there was a disparity between reading and writing. In the reading she

matched some words at the outset, but in the writing she used scribble except for her name and the date. The fact that she was using scribble for her messages prevented us from assigning her work to any stage.

Writing

At this stage, the children's transcription of their messages exhibited certain characteristics which we have previously described (Dobson, 1983; Hurst et al, 1983). We observed the use of:
-letters and numbers to represent words (2/two, U/you)
-telegraphic form in which a few letters, most often the first in a syllable, stand for a word (BTAFL/beautiful)
-letter-name strategy, in which children represent the sounds in words with the letter whose name most closely corresponds to how and where they perceive its articulation in their mouths (Y for /w/ as in YZ for was).
-strings of letters without spaces between words.



I saw a little girl walking down at night.

There was a wide variation in the length of time children spent working through this stage. The ones who progressed easily and rapidly seemed to be controlling their own learning by holding some aspects constant while working on others. They shortened their messages considerably, and/or limited subject matter, and/or used simple sentence patterns, sometimes repeatedly. This exercise of control allowed the children to demonstrate their alphabetic matches and gave us the opportunity to reinforce their success.

Four examples of Sally's work show her controlling the composition while she focused on various aspects of transcription:

| | | |
|---|---|---|
| a) | TT | tent |
| | MN | moon |
| b) | TW-AMSLD | There was a magical land. |
| c) | TR WZ A | There was a |
| | BT A FL HS | beautiful house |
| d) | TR WZ A | There was a |
| | BTAFL PESTD | beautiful present |

Sally found it easy to establish and maintain the match between her writing and her reading as she read her transcriptions.

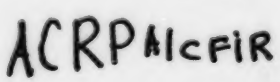
The children who continued to work at this stage for an extended period seemed to be struggling at working on a number of aspects at once. They tended to write long messages in which they found it difficult to establish and/or maintain a match. Our observations of their mouthing during writing made it clear they were transcribing their messages from sounds to letters. However, when they came to read their message it often did not fit with the print. They would be looking through the form to the meaning and predict a paraphrase of the original wording. This interfered with their retrieval of the match they had transcribed. They encountered a similar problem in the midst of their transcription when they stopped to read over what was already on paper. The telegraphic form they used and, in particular, the lack of spacing, made the reading difficult both for them and for us. If they predicted a paraphrase, they would have to alter their representations to fit with the new wording, or become hopelessly lost.

Such problems caused some children to experience repeated frustrations, yet it was notable that once children deliberately applied the alphabetic principle in their writing, it continued to appear.

On May 24th of his Kindergarten year, Sanjeev, an ESL pupil, began to audibly sound through his message as he recorded it. But when he came to read it his reading did not fit the print. When we probed to see if he could find "cat" in his writing, he was able to locate KT. In the next four samples he spontaneously matched part of his reading to the letters he recorded. He had consistently been sounding his way as he wrote. Knowing there was more of a match than he was able to report, (R) sat next to him and they both recorded the sounds as he made them. (R) made her record without looking at Sanjeev's.

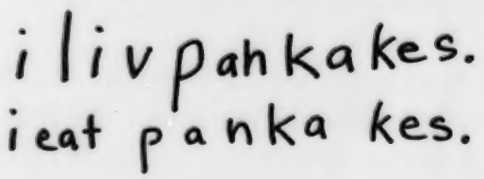
Sanjeev wrote: ACPPAICFiR
(R) wrote: /i/r/ing/ I saw /f/ ow/r/

Sanjeev read with his finger: "In the fall I saw a flower." Sanjeev then said, "Oh no," and reread CP as "summer", and changed the P to R with the result:



Then he said: " Oh no, it was spring" and read a third version which closely approximated the sounds he made when writing the original message.
"In the spring I see flowers."

This sequence illustrates many of the facets involved in this very complex task. The task is complex not only for writers but also for anyone trying to help them make sense of it. In fact, it was not until February 19 of Grade One that Sanjeev produced and retrieved a complete match for his message.




Reading

When we analyzed the reading of those children whose writing was characteristic of the semiphonetic stage, we found that it continued to consist of fluent inventions. There were signs that the children had more knowledge than they could apply. They could often locate isolated words in the text, spontaneously or upon request, as in the following conversation.

(R): "You read cat. Where does it say cat?"
Sally: "Here". (pointing).
(R): "How do you know?"
Sally: "Because I found a C."

At this stage many children tried to use the print in various ways. Some went to great lengths to speed up or slow down their message to coincide with the beginning and end of print. Others tried to track a match, emphasizing the word units, one by one.

Frances read: "There was a monster."
The text: **Where are they going?**

In this short but typical example, Frances managed the difficult task of matching words unit by unit while making her message make sense. On the next line she abandoned this attempt and continued to fluently create a sensible story without reference to print.

At the end of February of the Kindergarten year we presented the familiar book, Brown Bear, Brown Bear (Martin, 1970). A number of children knew enough about the wording of the refrain that they echoed parts of it as they read. The readings of children in the semiphonetic stage of writing differed qualitatively from those at an earlier stage. These children were clearly attempting to integrate a word-by-word match with the units of print.

Larry's comment upon seeing the book illustrated how children viewed the potential use of a new strategy to achieve a word-by-word match.

Larry asked: "Am I supposed to just do this - just turn the pages?"
(R): "No, you're supposed to read them . . . ."
Larry: "Oh."

In the first six pages (2 or 3 lines each), we observed him dipping in and out of the print. Larry achieved a number of word-unit matches, some of which were word-perfect. On page seven, he self-corrected from, "What do"(1), to "Blue horse" (2), and then proceeded to stay with the print. He persevered for four more pages, heavily emphasizing the word units and reading accurately except for one recurring phrase. However, it was laborious, for Larry said:

"I just turn a few pages - so it won't be so long, right?"

After skipping four pages, he gradually read more rapidly, adding the new strategy of repeating one refrain to stand for the problem phrase. Having dealt with his problem, he then read confidently to the end.

2)Blue horse
1)What do
**Blue horse,**

blue horse
**blue horse,**

what do you see
**what do you see?**

The children used comparable strategies when they read <u>My Shirt is White</u> (Bruna, 1972) in June. The data from these readings did not add significantly to this report.

## <u>Phonetic Stage</u>

We assigned children's writing samples to this stage when they showed a fairly complete mapping of letters to the sounds, as they perceived them. In the reading, children had discontinued inventing the story line. They seemed to know that text is worded in a specific way and therefore cannot be paraphrased. The children's focus was on the text at the word level and they worked at integrating a graphophonic strategy into their repertoire.

Writing

The fuller representation of words was accompanied by the clear separation of word units. In some cases children emphasized the units by the use of marks. On January 8 of Grade One, Donald wrote:

DA ___ MAN

WS DGEG-A-HLL

The man was digging a hole.

The children used systematic strategies in representing sounds but some representations were unconventional (Dobson,1983; Hurst et al, 1983). They seemed to systematically classify vowel sounds on the basis of their perceived place of articulation in the mouth, (A for /ĕ/, E for /ĭ/) and omitted any representation of the nasal before a consonant. When Donald wrote PEC for pink, he was applying these classifications.

A KCID SOD A RAD

AND PEC HWS

A kid sawed a red and pink house.

The children made steady progress toward conventional forms. The next example is typical in the increasing use of lower case letters and in the appearance of punctuation.

The caf
The dot

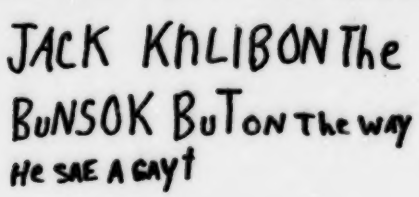
The captain of the boat.

(R): "How did you know to do these (periods)?"
James: "Mrs. S. told us to do those."
(R): "How did you know where to put them?"
James: "After my writing, I have to put a period."

Reversals such as the d in boat still appeared at this stage. Some children seemed to avoid such confusions by retaining some upper case forms.

In the previous and following samples, the writers used spacing alone to separate the words. This made their writing much more readable both for themselves and for us. They could retrieve their message, read it and make any corrections they wished.

The children wrote longer and more elaborate messages which indicated that the phonetic strategy freed the writers to be more ambitious in their communications. Certain reading selections inspired the children to write about them. Some children chose to rewrite their favourite stories.




Jack climbed on the beanstalk.
but on the way he saw a giant.

Reading

All of a sudden we found the children making a big effort to read text word by word, using graphophonic cues. This marked the reapppearance of the strategy used earlier but which they had confined to the two familiar stories. It was clear that children were working at integrating a number of strategies: to make sense, to use context of picture and story, to make it sound like language, to match word units and to use letter/sound correspondences. Some of their efforts created an imbalance, with one or more aspects being emphasized at the expense of others.

One reader began to read, "The am", for I am and then self-corrected. In his second attempt he managed to match word units, apply some sound/symbol correspondences and still maintain syntax and meaning.

2) I am a green and big shiny ghost.
1) The am
**I am a ghostie, a big scary ghostie.**

An ESL reader, Arleen, first read, "Go have" for Go home and then unsuccessfully corrected it to, "Go here", on the basis of syntax and meaning. She predicted, "turkey" for ducks, then revised it to "duck", and then correctly to, "ducks", which she likely confirmed from the print. In the second line of text, the reader abandoned her correct prediction of sheep on the basis of meaning according to her understanding of the plural form and to her knowledge of decoding sound/symbol correspondences. The word, butcher, in the third line is unlikely to have been in Arleen's vocabulary and so she substituted a sensible word that fit within her experience and within the total context.

3)Go here said the ducks. No said Little Pig.
2)Go here said the duck.
1)Go have said the turkey.
**"Go home," said the ducks. "No," said Little Pig.**

2) sheep. No said Little Pig.
1)Go here said the sheeps.
**"Go home," said the sheep. "No," said Little Pig.**

1)Go here said the mister
**"Go home," said the butcher. . .**

Some children focused so heavily on the print that they lost meaning. Donald read, "Go him?", with a question in his voice. He commented, "That doesn't make sense", using meaning to disconfirm his prediction yet not correcting it. He was also disatisfied with his substitution of "chickens" for <u>hens</u>, this time noting that the print did not fit.

Go him said the chickens
**"Go home," said the hens.**

The children seemed to be thinking on many different levels all at once. They were recognizing many words as sight units. However, they were obviously not just naming words in sequence or merely decoding letters to sounds.

Children often interacted with the text by reacting to events or outcomes as they read. Their comments indicated their involvement with the meaning.

In the book, <u>Look for Me</u>, a mother was looking for her child. When Arleen read that the mother looked up the chimney, she remarked:

"She's finding him in here? Oh, God!"

<u>Transitional</u>

At this stage, the children's writing and reading became fairly automatic and fluent. As they developed this control over the mechanics of transcription and decoding, they focused more on the context of writing and reading.

Writing

By the end of the study three writers were entering this stage. They expanded their spelling strategies to include visual and morphophonemic units which incorporate aspects of grammar and meaning.

The writing could now stand on its own and did not depend upon the context of a drawing. Some children now chose to write first and to illustrate later. In addition to writing journal pieces and retelling stories they chose to set up original story situations.

It was fun To See The little Mos Becos
The Mos Was Snecing Be Hoind
The cat and The Dog Was To
apr 16, 1985

This story contains numerous sight words and the grammatical unit, ing. The writer has set up and described an action. The illustration was now an accompaniment to the writing, rather than the reverse.

Reading

There was a return to fluency in the reading of children at this stage. Now, however, they were recreating the author's message rather than inventing their own. The fluent reading indicated that they were recognizing a number of function words at sight. The readers were now using the text itself for context and they were able to integrate strategies as they needed them.

Two children successfully read one selection which contained the following text.

**Look out for mumble trees. They are full of bumble bees.**
**Look out for telephones. They are full of rattle bones.**
**Look out for elevators. They are full of alligators.**

In the following example, Jane omitted ditches on the first reading of the book. When asked if she noticed anything, she replied, "It rhymed." When asked if that gave her any ideas, she flipped to the problem word and used the rhyme to reread and self-correct.

2) Look out for ditches. They are full of witches.
1) Look out for They are full of witches
**Look out for ditches. They are full of witches.**

At this stage children have consolidated their reading strategies to the point at which they can refine them independently.

## Discussion

The children's progress confirmed the belief that children will learn to read and write through successive approximations just as they learn to speak and understand. The environment conducive to oral language learning enabled all the children to induce the rules of written language. Although many were ESL and few were well prepared for school, they all willingly engaged in the tasks. The fact that such a diversity of children could effectively participate suggests that this study contains significant implications for teaching. As the children's work readily fit into the previously established framework of stages, we used it to document the results. The detailing of their development through these stages revealed a very logical progression.

In the children's initial approximations they used their prior knowledge of grammar and meaning to fluently invent a message which fit with the illustrations or drawings. They then continued to work with the whole, while they shifted strategies to incorporate the alphabetic principle. This effort resulted in a temporary loss of fluency but they rarely lost sight of the meaning.

Seventeen out of the eighteen children used the alphabetic principle in the writing and reading of their own messages well before they used it in reading text. Although probes and spontaneous comments indicated that they were aware of its application in text, only as writers were they able to show progress in its use. The children were using the principle, however, when they read their own writing. At this point writing was providing them with the opportunity to develop strategies which they would later apply in their reading of text.

Jane was the only child who applied the alphabetic principle in her reading of text from the beginning of the study. For a four-month period she failed to use any print in her written messages. In other situations we had observed children who read well, but who went to great lengths to avoid writing. They seemed unwilling to risk error, possibly because by then they knew what conventional text should look like and did not feel competent to write at this level. Jane's first printed message incorporated visual and phonetic strategies. It seemed as if she were biding her time until she could achieve this standard.

There was a point at which the children suddenly integrated the use of the graphophonic cue system in the reading of text. They seemed to identify a number of words by sight as they read word by word. They sometimes resorted to a phonic strategy but seldom emphasized the sounds within words. When something did not make sense they usually indicated their awareness of it and often tried to self-correct. Once they achieved a certain measure of control over the mechanics of transcription and decoding they began to reestablish fluency. The control over the mechanics in reading allowed the children to recreate the author's message rather than to invent their own. It seemed that the insights they were gaining from reading conventional text were now influencing their writing. They wrote longer messages, represented words more fully and separated them. These factors made the writing look more like text and made it more readable.

Although there were many consistencies in the sequence of development across children, the rate at which they progressed was quite individual. A number of factors seemed to be at work. Our view of learning suggested that children's willingness to assume control over their learning will affect their progress. The children who made rapid progress used initiative and had the flexibility to try out a variety of strategies. They seemed to have the drive and faith in themselves to make sense of things. These were the children who were more likely to monitor and to self-correct their work. Some children's representations seemed more mature than others from the beginning, yet in the end, the most important factor in their progress seemed to be that of personality.

## Implications

A teacher needs to find out how children approach learning, the thinking that they use, their competencies and a way to inspire their wholehearted involvement in learning. As we designed this study to maximize such observations, we were in fact, developing an approach to teaching. We discovered that the way we were interacting with the children was a vital part of what we learned and what the children learned. The children created meaning and we responded on that level. We consciously projected faith in the children that they could trust themselves to solve problems of form and we treated their solutions with respect. Their errors were signposts to development which allowed us to infer their thinking. Teachers and/or researchers who reject erroneous solutions outright will lose the opportunity to identify children's strategies and build on them. In addition such rejections will discourage children from trying their own thinking and trusting their own judgements.

Teachers who wish to use highly individualized interactions with children need principles to guide them. The paramount importance of the principles (Appendix A) to the outcome of this study and the implications for teaching, lead us to present the refined version (Hurst, 1985) here.

### Principles Which Nurture Literacy

1. Provide a warm social setting.
2. Immerse learners in a literate environment.
3. Accept and encourage successive approximations of literacy.
4. Expect self-selection of materials and of topics.
5. Respond to intended meaning as the absolute priority.
6. Emphasize the process rather than the product.
7. Expect hypothesis-testing and self-correction.
8. Expect a developmental progression along the learning continuum.
9. Evaluate individually and longitudinally.

The controversy between teaching reading by a sight or phonic method is inappropriate when considered within the context of this study. The children were composing meaning as they read and wrote. They were applying multi-level strategies at all times based upon their prior knowledge. Teachers who emphasize either approach lead children away from a deeper understanding of the whole process and shift their attention to the superficial word level.

As they wrote, the children practised and applied their knowledge of sight words and of phonics. They also practised the reading of their writing. They were able to deal with the whole rather than needing to build from the parts. Teachers can model reading and writing as whole processes, keeping the focus on the meaning. If we expect children to pursue meaning we must present them with materials that capture their interest. These materials must be predictable, have natural language and be inherently sensible.

Children learn to read and write through successive approximations. Teachers need to find out just how these approximations develop so that they can recognize and encourage advances along the continuum. Teachers can trace this development through a longitudinal examination of their work.

The children's work readily fit within the broad developmental framework we set up. But all children are unique. We do not suggest that they all have to or ought to follow the same route. It is not our intention to substitute one inflexible approach for another. The framework provides a new perspective and should be used as a guide for observations and individual teacher judgements. Not only children need to be in control of their learning, but teachers need to have clear expectations and to be in control of their programs.

The particular perspective that we brought to the study enabled us not only to trace the growth of literacy, but also to illuminate significant facets in learning and teaching. If the goal of education is to develop citizens who form their own opinions and make their own judgements, then the means by which we teach must foster this goal.

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APPENDIX A

PRINCIPLES

1. Provide a warm social setting.
2. Accept the children's offerings as legitimate indications of their existing conceptualizations.
3. Observe and record strategies which reflect on the process as well as the product.
4. Expect children to approach reading and writing as meaningful enterprises in which they will use their initiative and all the resources at their disposal to solve their problems.
5. Expect children to choose materials and topics to ensure that the processes will be meaningful and purposeful to them.
6. Expect children to create or use existing illustrations as a source and support for written language.
7. Expect a developmental progression in which errors are natural rather than habit-forming and which will be self-corrected in direct relation to the stage of development.
8. Evaluate individually and longitudinally in terms of the stages of literacy development.

(adapted from Hurst, 1982, pp. 90,91)

# Appendix B

AN EVOLVING MODEL OF THE CONTINUUM OF EMERGENT LITERACY

| Emergent Reading | | | Emergent Writing |
|---|---|---|---|
| Oral to Book Language | Direction and Position | Cues Used to Predict and Correct | |
| relating events telling stories | | | scribble |
| talking to print | | own experiences, own dialect | shapes |
| book-like talking | | own experiences, some story-like schema, some book-like phrases | linearity, symbol-like |
| picture-controlled | page-matching | more book-like phrases, picture cues | random letters |
| fluent partially remembered sentences | | some book-like sentences, pictures | unstable direction, prints own name |
| partially memorized fluent sentences | line-matching | more story schema, book-like sentences, pictures, short lines of print | single letters - knows must be specific |
| slower, book language | locating familiar words | story schema, book language, pictures, trying to segment into words | semi-syllabic, letter-name strategy, no vowels |
| intervals of staying with the print and of fluency | finger-pointing | focus on word-space-word matching may skip unfamiliar words (no response) | direction controlled, approximating vowels, some sight words |
| staccato, book-like | voice-pointing | less semantic/syntactic, focus on words and 1st letters for self-correction | Writing learning independently, fine phonetic discriminations - own perceptions |
| | Reading | | |
| light stress on words, learning independently | | more prediction of semantic/syntactic, checking re words, 1st and last letters, learning independently | correct unmarked vowels |
| phrasing-fluency returning | | graphic successfully subordinated to semantic/syntactic predictions, starting to use letter clusters | some vowel markers |
| | | balanced integration of all cue systems in appropriate materials | some inflectional patterns |
| | | | some derivational patterns |

Hurst, 1982, p. 89

## APPENDIX C

### AN EVOLVING MODEL OF THE CONTINUUM OF EMERGENT LITERACY (WRITING SECTION)

#### WRITING

**Precommunicative**
- scribble
- shapes
- linearity
- symbol-like
- random letters
- unstable direction
- prints own name

**Semi-Phonetic**
- single letters-knows must be specific
- direction controlled
- complete message represented
- semi-syllabic, letter name strategy,
- short vowels not represented

**Phonetic**
- approximating short vowels
- sight words appearing
- most surface sounds represented as perceived

**Transitional**
- beginning to represent vowels conventionally
- beginning of inflectional patterns (ed, ing)
- increasing use of visual patterns

**Correct**
- vowel markers
- inflectional patterns
- derivational patterns

(Dobson, 1983, Table II)

APPENDIX D

RECORD OF WRITING GROWTH

Name _____

Date _____

Writing Process
- no writing
- direction
- scribble
- symbols
- letters - capitals
- - small
- numbers
- diff. print from drawing
- relates message while writing
- composes aloud while writing
- rereads in process

Source of Message
- no message
- uses illustration only
- illustr. & print unrelated
- uses illustr. but ld's print
- uses print

Quality of Message
- labels
- fragmented
- speech-like descrip. of illustr.
- elaboration of illustr.
- gramm. acceptable
- semant. acceptable

Matching Oral to Written Language
- oral to illustr. only
- dips into print
- begins & ends w. print
- word to a symbol unit
- word to specific letter
- word to word
- reads with finger
- adjusts or corrects

Comments upon:
- letters
- words
- punctuation

APPENDIX E

RECORD OF WRITING GROWTH

Name _____

Date _____

PRODUCTION:

- cursive-like
- letters (1) - capital
  - small
- asks/looks for help
- name
- a/v copy - try
  - ✓
- relates message
- any single l. for word
- alphabetic appears

ALPHABETIC

- specific single l. to w.
- sounding aloud
- spelling aloud
- rereads in process
- begin. & final l's
- most consonants
- long vowels
- segments - groupings
  - syllables
  - single words
- short vowel rep.
- # of approx. st. w's - try
  - ✓
- most surface sounds rep'd

TRANSITIONAL

- short vowels consistent
- inflected patterns (ed,ing)
- # of vowel markers
- self-corr. - (G,Se, Sy)

COMPOSITION

- labels
- journals
- story

REREADS - match oral to writ.

- finds initial match - try
  - ✓
  - part
- relocates - ✓
  - fail
- rereads
- self-corr. - G,Se,Sy - ✓
  - fail
- improves product - G,Se,Sy
- edits during reading - G,Se,Sy

APPENDIX F

RECORD OF READING GROWTH NAME

Book
Date

Book Handling
- open
- directon - front to back
- pages in sequence
- path of print
self-correct - try
- ✓
pointing - eye
- finger
- voice

Source of message
clues from: illustr. only
illustr. but id. print
illustr. & print

Quality of language
fragmented
labelling - illustr.
- print
description of illustr.
elaboration - illustr.
- story
accept. - graphophonic
- grammatic
- semantic
self-correct - try
- ✓

Matching oral to writ. language
oral to illustr. only
comments on print
ends with print
word/syllable to letter (1)
word(w)/syll. to word unit
dips in and out of print
word-matching (w. to w. units)
miscues - patterns, sounds to l's
self-correct - try
- ✓

## APPENDIX G

RECORD OF READING GROWTH

Name _____

Book _____
Date _____

BOOK HANDLING
- Open
- Direction of pages
- Pages in sequence
- Left to rt. page seq.
- Path of print
- Lines top to bot.

TRACKING
- Picture
- Sweep w. finger (f)
- Word by word - f.
- Fluent w. f.
- Word by word - voice
- Fluency
- Self-corr. - try
  - ✓

MATCHING ORAL TO PRINT
- Oral to illustr. only
- Semantic (Se)
  - self-corr. - try
    - ✓
- Syntactic (Sy)
  - self-corr. - try
    - ✓

TIME/SPACE
- Begins w. print
- Ends w. print
- Matching words as units
- Attn. to 1st letters - O
- Single word (W) Id. - O
  - S
  - self-corr. - try
    - ✓

ALPHABETIC
- Sounds aloud
- Asks for a word

CUE SYSTEMS
- Dominant cue(s) W,G,Se,Sy
- Disconfirm cue G,Se,Sy
- Self-corr. - G,Se,Sy - try
  - ✓
- Corrects (O)

## APPENDIX H

Ready Set Go D-4 - Two little dogs

Name _____

Date _____

TWO LITTLE DOGS

TWO LITTLE DOGS

LOOK! THE DOOR'S OPEN. THAT'S GOOD

LOOK! THE GATE'S OPEN. THAT'S GOOD.

THE TWO LITTLE DOGS RAN AFTER A CAT.

THEY RAN AFTER A BIRD.

THEY RAN AFTER A MOUSE.

THEY RAN AFTER A RABBIT.

THEY STOPPED.

"A BIG, BIG DOG!" THEY SAID.

"WE WON'T RUN AFTER HIM."

AND THEY DIDN'T.

HE RAN AFTER THEM

ALL THE WAY HOME.

LOOK! THE GATE'S OPEN. THAT'S GOOD.

LOOK! THE DOOR'S OPEN. THAT'S GOOD.